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EXAMINER	
VO, HUYEN X	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/891,399	KEILLER, ROBERT ALEXANDER	
	Examiner	Art Unit	
	Huyen Vo	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21,27-31,38 and 39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21, 27-31, and 38-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant has submitted an amendment filed 12/27/2004, amending claims 1, 4, 11-14, 16, 18, 20, and 38, while arguing to traverse the art rejection based on limitations regarding "*the grammar store comprises at least first and second grammars having grammar rules and at least one interface grammar defining an interface of grammar rules and not including the content of the grammar rules, the first grammar being arranged to use grammar rules defined by the interface grammar and the second grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by interface grammar, and that a speech recognition grammar instructions providing means is arranged to providing instructions for causing the second grammar to be combined with the first grammar based on the interface grammar*" (*see remark/argument section of the response pages 19-20*). Applicant's arguments have been fully considered but they are not persuasive. As relied pointed out in the previous rejection, Hunt et al. (US 6374226) teach a speech recognition system containing a first and second grammars (*figure 3*). The first and second grammars can be combined to create a new and more complex grammar required by the speech recognizer (*col. 5, line 61 to col. 6, line 67*). The speech recognition system also includes a grammar interface and a means for dynamically changing and updating grammars based on the grammar interface (*col. 15, line 20 to col. 18, line 67, the*

grammar interface initiates grammar/rule changes to meet the speech recognizer's need). With the above teachings, previous ground of rejection is maintained.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3-14, 16-21, and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US Patent No. 6408272) in view of Hunt et al. (US Patent No. 6374226).

4. Regarding claim 1, White et al. disclose a system comprising: at least one device having a processor-controlled machine for causing at least one function specified by a user to be carried out and a control apparatus for enabling voice-control of the processor-controlled machine and a speech processing apparatus having means for receiving speech data representing speech by a user (*referring to figures 1-2*), a grammar store storing speech recognition grammars (*col. 7, ln. 17-56*), speech recognition means for recognizing speech in the received speech data using at least one of the speech recognition grammars (*col. 7, ln. 17-56*), speech interpreting means

for interpreting the recognized speech to provide instructions for controlling at least one function of a processor-controlled machine and transmitting means for transmitting the instructions to the control apparatus (*col. 7, ln. 17-56*), the control apparatus being arranged to couple the processor-controlled machine to the speech processing apparatus (*referring to figures 1-3*), and wherein the grammar store comprises at least first and second grammars having grammar rules and at least one interface grammar defining grammar rules (*col. 16, ln. 1-28*).

White et al. fail to specifically disclose that the control apparatus includes means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus, wherein the store comprises at least first and second grammars having grammar rules and at least one interface grammar defining grammar rules, the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar.

However, Hunt et al. teach that the control apparatus includes means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and

means for transmitting speech recognition grammar instructions to the speech processing apparatus (*referring to figures 1 and 3, grammars are loaded into the recognizer for recognition of speech input*), wherein the store comprises at least first and second grammars having grammar rules (*figure 3*) and at least one interface grammar defining grammar rules (*col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*), the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67 and col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

5. Regarding claim 11, White et al. disclose a speech processing apparatus for receiving speech data representing commands spoken by a user for controlling a function of a device, the speech processing apparatus having: receiving means for

receiving speech data representing speech by a user (*elements 50-52 in figure 3*); a grammar store storing speech recognition grammars (*Grammars 74 in figure 3*); speech recognition means for recognizing speech in the received speech data using at least one of the speech recognition grammars (*Speech Recognition Engine 70 in figure 3*); speech interpreting means for interpreting recognized speech to provide instructions for enabling a function of a device to be controlled (*col. 7, ln. 1-56*); and transmitting means for transmitting the instructions to a device for enabling control of a function of that device (*elements 50-52 in figure 3*).

White et al. fail to specifically disclose that the control apparatus includes means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus, wherein the store comprises at least first and second grammars having grammar rules and at least one interface grammar defining grammar rules, the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar.

However, Hunt et al. teach that the control apparatus includes means for providing speech recognition grammar instructions regarding the speech recognition

grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus (*referring to figures 1 and 3, grammars are loaded into the recognizer for recognition of speech input*), wherein the store comprises at least first and second grammars having grammar rules (*figure 3*) and at least one interface grammar defining grammar rules (*col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*), the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67 and col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

6. Regarding claim 13, White et al. disclose a control apparatus for coupling a processor-controlled machine to speech processing apparatus for enabling a user to

control a function of a machine by spoken commands (*figures 1-3*), but fail to specifically disclose that the control apparatus having: means for providing speech recognition grammar instructions defining a speech recognition grammar or grammars to be used by the speech processing apparatus means for recognizing speech data; and means for transmitting to the speech processing apparatus the speech recognition grammar instructions for speech data representing words spoken by a user, the speech recognition grammar instructions providing means being arranged to provide instructions for causing first and second grammars to be linked by an interface grammar having grammar rules usable by the first grammar and implementable by the second grammar so as to form an extended grammar.

White et al. fail to specifically disclose that the control apparatus includes means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus, wherein the store comprises at least first and second grammars having grammar rules and at least one interface grammar defining grammar rules, the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar.

However, Hunt et al. teach that the control apparatus includes means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus (*referring to figures 1 and 3, grammars are loaded into the recognizer for recognition of speech input*), wherein the store comprises at least first and second grammars having grammar rules (*figure 3*) and at least one interface grammar defining grammar rules (*col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*), the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67 and col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

7. Regarding claim 14, White et al. disclose a control apparatus for enabling coupling of a processor-controlled machine to speech processing apparatus for enabling a user to control a function of the processor-controlled machine by spoken commands, the control apparatus comprising: receiving means for receiving from the speech processing apparatus instructions derived from speech recognized by the speech processing apparatus (*Transceiver 32 in figure 1*); dialog communication means for communicating with the user to provide information to the user in response to instructions received from the speech processing apparatus thereby enabling a dialog with the user (*col. 7, ln. 1 to col. 8, ln. 38*), wherein the dialog communication means has a number of different dialog states and is arranged to change dialog state in response to received instructions (*col. 7, ln. 1 to col. 8, ln. 38, the operation of the local device is based on instructions received from the remote server*).

White et al. fail to specifically disclose that the control apparatus includes means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus, wherein the store comprises at least first and second grammars having grammar rules and at least one interface grammar defining grammar rules, the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide

instructions for causing the second grammar to be combined with the first grammar based on the interface grammar.

However, Hunt et al. teach that the control apparatus includes means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus (*referring to figures 1 and 3, grammars are loaded into the recognizer for recognition of speech input*), wherein the store comprises at least first and second grammars having grammar rules (*figure 3*) and at least one interface grammar defining grammar rules (*col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*), the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67 and col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at

the time of invention to modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

8. Regarding claim 27, White et al. disclose that in a system comprising: at least one device having a processor-controlled machine for causing at least one function specified by a user to be carried out and a control apparatus for enabling voice-control of the processor-controlled machine and a speech processing apparatus having means for receiving speech data representing speech by a user (*referring to figures 1-2*), a grammar store storing speech recognition grammars (*col. 7, ln. 17-56*), speech recognition means for recognizing speech in the received speech data using at least one of the speech recognition grammars (*col. 7, ln. 17-56*), speech interpreting means for interpreting the recognized speech to provide instructions for controlling at least one function of a processor-controlled machine and transmitting means for transmitting the instructions to the control apparatus (*col. 7, ln. 17-56*).

White et al. fail to specifically disclose that the control apparatus includes means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus, wherein the store comprises at least first and second grammars having grammar rules and at least one interface grammar defining grammar rules, the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules

according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar.

However, Hunt et al. teach that the control apparatus includes means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus (*referring to figures 1 and 3, grammars are loaded into the recognizer for recognition of speech input*), wherein the store comprises at least first and second grammars having grammar rules (*figure 3*) and at least one interface grammar defining grammar rules (*col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*), the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67 and col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

9. Regarding claim 29, White et al. disclose a method of operating a speech processing apparatus for receiving speech data representing commands spoken by a user for controlling a function of a device, the method comprising: receiving speech data representing speech by a user (*Elements 50-52 in figure 3*); recognizing speech in the received speech data (*col. 7, ln. 1-56*); interpreting recognized speech to provide instructions for enabling a function of a device to be controlled (*col. 7, ln. 1-56*); and transmitting the instructions to a device for enabling control of a function of that device to form an extended grammar (*col. 7, ln. 1-56*).

White et al. do not disclose the steps of accessing a grammar store comprising at least first and second grammars having grammar rules and at least one interface grammar defining an interface of grammar rules and not including the content of the grammar rules; and causing a first grammar which include the interface of grammar rules defined by the interface grammar to be combined, based on the interface grammar with a second grammar which specifies grammar rules according to the interface defined by the interface grammar.

However, Hunt et al. teach the steps of accessing a grammar store comprising at least first and second grammars having grammar rules and at least one interface

grammar defining an interface of grammar rules and not including the content of the grammar rules; and causing a first grammar which include the interface of grammar rules defined by the interface grammar to be combined, based on the interface grammar with a second grammar which specifies grammar rules according to the interface defined by the interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67 and col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

10. Regarding claim 30, White et al. disclose a method of operating a control apparatus for coupling a processor-controlled machine to speech processing apparatus for enabling a user to control a function of a machine by spoken commands (*referring to figures 1-3 and col. 7, ln. 1-56*).

White et al. do not disclose a method comprising transmitting speech recognition grammar instructions defining a speech recognition grammar or grammars to be used by the speech processing apparatus means for recognizing speech data including instructions for causing first and second grammars to be combined, based on an interface grammar defining an interface of grammar rules and not including the content of the grammar rules, so as to form an extended grammar, the first grammar being

arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar.

However, Hunt et al. teach a method comprises transmitting speech recognition grammar instructions defining a speech recognition grammar or grammars to be used by the speech processing apparatus means for recognizing speech data including instructions for causing first and second grammars to be combined, based on an interface grammar defining an interface of grammar rules and not including the content of the grammar rules, so as to form an extended grammar, the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67 and col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

11. Regarding claim 31, White et al. disclose a method of operating a control apparatus for enabling coupling of a processor-controlled machine to speech processing apparatus remote from the processor-controlled machine for enabling a user

to control a function of the processor-controlled machine by spoken commands, the method comprising: receiving from the speech processing apparatus instructions derived from speech recognized by the speech processing apparatus (*element 32 in figure 2*); communicating with the user to provide information to the user in response to instructions received from the speech processing apparatus using a dialog which has a number of different dialog states dependent upon the received instructions (*col. 7, ln. 1 to col. 8, ln. 25*).

White et al. do not disclose the step of supplying to the speech processing apparatus instructions regarding the speech recognition grammar or grammars to be used in dependence upon the dialog state of the dialog communication means such that, in at least one dialog state, the instructions cause first and second grammars to be combined, based on an interface grammar defining an interface of grammar rules and not including the content of the grammar rules, so as to form an extended grammar, the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar.

However, Hunt et al. teach the step of supplying to the speech processing apparatus instructions regarding the speech recognition grammar or grammars to be used in dependence upon the dialog state of the dialog communication means such that, in at least one dialog state, the instructions cause first and second grammars to be combined, based on an interface grammar defining an interface of grammar rules and not including the content of the grammar rules, so as to form an extended grammar, the

first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67 and col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

12. Regarding claim 39, White et al. disclose a system comprising: at least one device having a processor-controlled machine for causing at least one function specified by a user to be carried out and a control apparatus for enabling voice-control of the processor-controlled machine and a speech processing apparatus having means for receiving speech data representing speech by a user (*referring to figures 1-2*), a grammar store storing speech recognition grammars (*col. 7, lines 17-56*), speech recognition means for recognizing speech in the received speech data using at least one of the speech recognition grammars (*col. 7, lines 17-56*), speech interpreting means for interpreting the recognized speech to provide instructions for controlling at least one function of a processor-controlled machine and transmitting means for transmitting the instructions to the control apparatus (*col. 7, lines 17-56*).

White et al. fail to specifically disclose the control apparatus being arranged to couple the processor-controlled machine to the speech processing apparatus and having means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus, wherein the grammar store comprises at least first and second grammars each having specific grammar rules and at least one interface grammar defining an interface of grammar rules but not including the specific rules of the first and second grammars, the first grammar including an instruction to import the interface grammar, and the second grammar associating an interface rule with specific rules of the second grammar, and wherein the speech recognition grammar instructions providing means is arranged to provide instructions for causing the second grammar to be combined with the first grammar by the first grammar importing the interface grammar and the second grammar implementing the specific rules of the second grammar associated in the second grammar with the interface rule.

However, Hunt et al. teach the control apparatus being arranged to couple the processor-controlled machine to the speech processing apparatus and having means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus (*figures 1 and 3, grammars are loaded into a speech recognizer for used in recognizing input speech*), wherein the grammar store comprises at least

first and second grammars each having specific grammar rules and at least one interface grammar defining an interface of grammar rules but not including the specific rules of the first and second grammars, the first grammar including an instruction to import the interface grammar, and the second grammar associating an interface rule with specific rules of the second grammar, and wherein the speech recognition grammar instructions providing means is arranged to provide instructions for causing the second grammar to be combined with the first grammar by the first grammar importing the interface grammar and the second grammar implementing the specific rules of the second grammar associated in the second grammar with the interface rule (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67 and col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

13. Regarding claims 3-4 and 17-18, White et al. further disclose a system according to claims 1 and 16 above, respectively, wherein the processor-controlled machine of said at least one device is arranged to carried out said at least one function (*col. 7, ln. 10-56*), wherein the processor-controlled machine is a microwave oven (*col. 7, ln. 17-40*).

14. Regarding claims 10 and 16, White et al. further disclose that the control apparatus is arranged to couple the processor-controlled machine to the speech processing apparatus via a network (*col. 9, ln. 11 to col. 10, ln. 35*), and device comprising a control apparatus in accordance with the claim 13 and a processor-controlled machine (*figure 2*).

15. Regarding claims 5-6 and 19-20, White et al. further disclose a system according to claims 1 and 16 above, respectively, wherein the processor-controlled machine of said at least one device is arranged to cause another device coupled to the network to carry out the at least one function (*col. 7, ln. 10-56*), and the other device is a device comprising a processor-controlled machine and a control apparatus (*referring to figures 1-3*).

16. Regarding claims 7-8, 12, and 21, White et al. further disclose that different type of devices can be used as the local device (*col. 5, ln. 39-54*) and different grammars can be used for specific application of the local device (*col. 7, ln. 1-67*). White et al. fail to specifically disclose that at least one device comprises a digital camera and said other device comprises a printer, and the first grammar comprises a camera grammar and the second grammar comprises a printer grammar. However, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White by incorporating a camera as the local device and printer as the server, each having its

own grammar. The advantage of this is to use voice command to print pictures, at a remote location, taken by the camera.

17. Regarding claim 9, White et al. disclose a system according to claim 1, wherein the control apparatus comprises receiving means for receiving instructions derived from speech recognized by the speech recognition means (*Transceiver 32 in figure 2*); dialog communication means for communicating with the user to provide information to the user in response to instructions received by said receiving means thereby enabling a dialog with the user (*Elements 20-26 in figure 2*), wherein the dialog communication means has a number of different dialog states and is arranged to change dialog states in response to instructions receiving by the receiving means (*col. 7, ln. 1-55, the operation of the local device will change according the instructions received from the server*).

White et al. fail to specifically disclose that the control apparatus is arranged to supply to the speech processing apparatus instructions regarding the speech recognition grammar or grammars to be used in dependence upon the dialog state of the dialog communication means such that, in at least one dialog state, the control apparatus is arranged to provide instructions to cause said first and second grammars to be combined, based on said interface grammar.

However, Hunt et al. teach that the control apparatus is arranged to supply to the speech processing apparatus instructions regarding the speech recognition grammar or grammars to be used in dependence upon the dialog state of the dialog communication

means such that, in at least one dialog state, the control apparatus is arranged to provide instructions to cause said first and second grammars to be combined, based on said interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

18. Regarding claim 28, White et al. disclose a method according to claim 27, which comprises: receiving instructions derived from speech recognized by the speech recognition means (*col. 7, ln. 1 to col. 8, ln. 25*); and communicating with the user to provide information to the user in response to received instructions enabling a dialog with the user with the dialog having a dialog state dependent on the received instructions (*col. 7, ln. 1 to col. 8, ln. 25*).

White et al. fail to disclose the step of supplying to the speech processing apparatus instructions regarding the speech recognition grammar or grammars to be used in dependence upon the dialog state such that, in at least one dialog state, the instructions cause said first and second grammars to be combined, based on said interface grammar. However, Hunt et al. further teach that the step of supplying to the speech processing apparatus instructions regarding the speech recognition grammar or grammars to be used in dependence upon the dialog state such that, in at least one

dialog state, the instructions cause said first and second grammars to be combined, based on said interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67*).

Since White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

19. Claims 2 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US Patent No. 6408272) in view of Hunt et al. (US Patent No. 6374226), as applied to claims 1 and 13 above, and further in view of Baker et al. (US Patent No. 6456974).

20. Regarding claims 2 and 15, the modified White et al. do not disclose a control apparatus according to claims 1 and 13 above, respectively, wherein the control apparatus comprises a JAVA virtual machine. However, Baker et al. teach that the control apparatus comprises a JAVA virtual machine (*figures 1-3*).

Since the modified White et al. and Baker et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify White et al. by incorporating the teaching of Baker et al. in order to enhance speech recognition accuracy.

21. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US Patent No. 6408272) in view of Dragosh et al. (US Patent No. 6078886), and further in view of Hunt et al. (US Patent No. 6374226).

22. Regarding claim 38, White et al. disclose a system comprising: a processor-controlled machine for causing at least one function specified by a user to be carried out (*figure 2*); a control apparatus for enabling voice-control of the processor-controlled machine (*figure 2*); an audio input device for receiving speech from a user and for supplying speech data representing the received speech (*element 20 in figure 2*); and a speech processing apparatus having means for receiving speech data from the audio input device (*figure 3*), a grammar store storing speech recognition grammars, speech recognition means for recognizing speech in the received speech data using at least one of the speech recognition grammars, speech interpreting means for interpreting the recognized speech to provide instructions for controlling at least one function of a processor-controlled machine and transmitting means for transmitting the instructions to the control apparatus (*figures 1-3 and col. 7, ln. 1-67*).

White et al. do not disclose that the control apparatus being arranged to couple the processor-controlled machine to the speech processing apparatus and having means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus, wherein the grammar store comprises at least first and

second grammars having grammar rules and at least one interface grammar defining an interface of grammar rules and not including the content of the grammar rules, the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar.

However, Dragosh et al. teach that the control apparatus being arranged to couple the processor-controlled machine to the speech processing apparatus and having means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognizing speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus (*col. 4, ln. 27-56*).

Since White et al. and Dragosh et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify White et al. by incorporating the teaching of Dragosh et al. in order to enhance speech recognition accuracy by providing specific grammars for specific application.

The modified White et al. still fail to disclose that the grammar store comprises at least first and second grammars having grammar rules and at least one interface grammar defining grammar rules, the first grammar being arranged to use grammar

rules defined by the interface grammar and the second grammar being arranged to implement rules defined by the interface grammar, and wherein the speech recognition grammar instructions providing means is arranged to provide instructions for causing the second grammar to be linked to the first grammar using the interface grammar.

However, Hunt et al. further teach that wherein the store comprises at least first and second grammars having grammar rules (*figure 3*) and at least one interface grammar defining grammar rules (*col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*), the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing speech means is arranged to provide instructions for causing the second grammar to be combined with the first grammar based on the interface grammar (*referring to figure 3 and col. 5, ln. 1 to col. 6, ln. 67 and col. 15, line 20 to col. 18, line 67, the grammar interface initiates grammar/rule changes to meet the speech recognizer's need*).

Since the modified White et al. and Hunt et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify White et al. by incorporating the teaching of Hunt et al. in order to enhance speech recognition accuracy.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Vo whose telephone number is 703-305-8665. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER